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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,256	03/01/2002	Kishan Khemani	11527.354	4244

22913 7590 07/08/2005

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EXAMINER

WOODWARD, ANA LUCRECIA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/087,256

Applicant(s)

KHEMANI ET AL.

Examiner

Ana L. Woodward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on April 6, 2005
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-28 is/are pending in the application.
- 4a) Of the above claim(s) 4-6, 13, 24, 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1, 3, 7-12, 14-23, 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 7 is/are rejected.
- 7) ☐ Claim(s)        is/are objected to.
- 8) ☐ Claim(s)        are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on        is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No.       .
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/6/05
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 4-6, 13, 24, 27 and 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 24, 2004.

### *Claim Rejections - 35 USC § 112*

2. Claims 1, 3, 7-12, 14-19, 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The inclusion of the new language “and optionally thermoplastic starch” renders the metes and bounds of the “soft thermoplastic biodegradable polymer portion” indefinite. This is because thermoplastic starch constitutes a species of soft synthetic thermoplastic biodegradable polymers within the scope of the claimed invention. Accordingly, it is unclear as to whether or not thermoplastic starches are excluded from the “soft synthetic thermoplastic biodegradable polymer” recitation.

In claim 1, lines 2-4, it is unclear as to whether the glass transition limitation is governing the entire “soft thermoplastic polymer portion”, the “soft synthetic thermoplastic biodegradable polymer” or the “thermoplastic starch”.

In claim 1, lines 5-7, it is unclear as to whether the glass transition limitation is governing the entire “stiff thermoplastic polymer portion” or solely the “stiff synthetic thermoplastic biodegradable polymer”.

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In claim 7, it is unclear as to whether the content limitation is governing the entire “stiff thermoplastic polymer portion” or solely the “stiff synthetic thermoplastic biodegradable polymer”.

In claims 8-10, it is unclear as to whether the glass transition limitation is governing the entire “stiff thermoplastic polymer portion” or solely the “stiff synthetic thermoplastic biodegradable polymer”.

In claims 11 and 12, it is unclear as to whether the glass transition limitation is governing the entire “soft thermoplastic polymer portion”, the “soft synthetic thermoplastic biodegradable polymer” or the “thermoplastic starch”.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 7-12, 14-23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,096,809 (Lorcks et al) further in view of U.S. 5,817,721 (Warzelhan et al) as per reasons of record.

5. Claims 1, 3, 7-12, 14-23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,806,353 (Zhang et al) further in view of U.S. 5,817,721 (Warzelhan et al).

Zhang et al biodegradable composites and sheets therefrom comprising blends of

i) 5-90 parts by weight of plant protein,

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ii) 90-5 parts by weight of polycaprolactone, reading on the presently claimed soft polymer and

iii) 25-0 parts by weight of modified poly(ethylene terephthalate), i.e., BIOMAX, reading on the presently claimed stiff polymer (column 1, lines 15-17, column 7, lines 39-65).

Zhang et al differs in essence from the presently claimed invention in not expressly exemplifying a composition that includes the stiff BIOMAX material in an amount greater than “about 55%” based on the combined weight of the soft and stiff thermoplastic polymers. In this regard, it is noted that Zhang et al disclose as preferred, blends of polycaprolactone and BIOMAX in ratios of 50/50 to 75/25 (column 9, lines 50-61). The disclosure by the reference of an exemplified embodiment, however, does not teach away from the entire disclosure of the patent, all of which must be considered in the analysis of obviousness. In this regard, it is noted that the amount of BIOMAX can be as high as 25 parts and the amount of polycaprolactone as low as 5 parts, with plant protein as the remaining 70 parts, based on 100 parts. Accordingly, it is maintained that it would have been obvious to one having ordinary skill in the art to have employed the BIOMAX material in an amount greater than “about 55%” based on the combined weight of the soft and stiff thermoplastic polymers.

With respect to the claims requiring a filler material, it is maintained that the generic “fillers” prescribed by Zhang et al (column 6, line 43) should be interpreted broadly to include any conventional filler organic or inorganic having any of a variety of different forms or shapes inclusive of particulate form. The addition of from 0-80% by weight of fillers, particulate and fibrous, to analogous biodegradable polymer compositions is well known in the art as evidenced by Warzelhan et al.

***Response to Arguments***

6. Applicant's arguments filed April 06, 2005 with respect to Lorcks et al have been fully considered but they are not persuasive.

Lorcks et al disclose films derived from biologically degradable compositions comprising

1) thermoplastic starch,

2) at least one polymer selected from the group consisting of aromatic polyesters, polyester copolymers having both aliphatic and aromatic blocks, polyesteramides, polyethylene oxide polymers, polyglycols and polyester urethanes and

3) at least one aliphatic polyester or copolyester. The thermoplastic starch is included in an amount in a range from about 10% to about 95% by weight of the composition.

In Example 2, Lorcks et al's composition comprises 34.9 % thermoplastic starch, reading on the presently claimed soft polymer, 50% BAK 1095 polyesteramide, reading on the presently claimed stiff polymer, and 12% polycaprolactone, reading on the presently claimed soft polymer. The amount of stiff polymer in said example constitutes 52% based on the combined weight of the soft and stiff polymers.

It is not seen that the presently claimed amount of "greater than about 55%" distinguishes patentably over the reference's exemplified 52%. This is because there may be an overlap in the amount of the present claims and the reference given the inexactitude of "about" 55%.

Furthermore, because the claimed amount and the exemplified prior art amount are very similar, the range of the prior art establishes prima facie obviousness because one of ordinary skill in the art would have expected similar ranges to have the same properties. See *In re Peterson*, 65 USPQ 1379. Furthermore, the disclosure by the reference of an exemplified embodiment does

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not teach away from the entire disclosure of the patent, all of which must be considered in the analysis of obviousness. In this regard, it is noted that the amount of starch in the Lorcks et al composition can be as low as “about” 10%.

As to the amendment to claim 20 specifying a “particulate filler”, it is maintained that the generic “fillers” prescribed by Lorcks et al should be interpreted broadly to include any conventional filler having any of a variety of different forms or shapes inclusive of particulate form. The express disclosure by the reference of a preferred filler, i.e., cellulose fibers, does not teach away from the entire disclosure of the patent, all of which must be considered in the analysis of obviousness. The addition of from 0-80% by weight of fillers, particulate and fibrous, to analogous biodegradable polymer compositions is well known in the art as evidenced by Warzelhan et al.

7. Applicants’ arguments and terminal disclaimer filed April 6, 2005 have effectively overcome the 35 USC 102/103 and double patenting rejections over Khemani et al.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

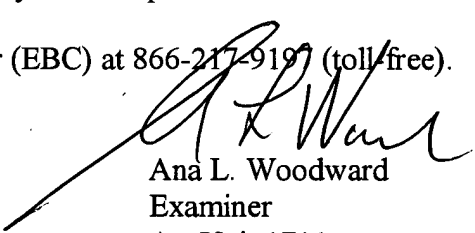
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



Ana L. Woodward  
Examiner  
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